

In the Specification:

Please insert the following paragraph beginning at page 18, line 6:

Figs. 36C and 36D are wave forms which are useful for explaining operation of an exemplary embodiment of the present invention.

Please replace the paragraph, beginning at page 79, line 25, with the following rewritten paragraph:

As shown in Figure 33(b) and Figure 4914(a), for example, in the data structure when $n=1$, there are only four data rows 951a, 951b, 951c, and 951d, followed by ECC rows 952a, 952b, 952c, and 952d. Figure 4914(a) is a diagram showing Figure 33(b) in further detail. The data row 951 constitutes EDC of 4B. Figure 4914(b) shows this in an equivalent form. Error-correction encoding computation is performed, assuming that data rows from 951e to 951z all contain 0s. Mathematical equations for EDC and ECC computations are shown in Figures 4914(c) and 4914(d), respectively. In this way, the data is ECC-encoded by the ECC encoder 927 in the recording apparatus of Figure 1 and recorded as a barcode on the disk. When $n=1$, data of 12B is recorded over an angle of 51 degrees on the disk. Likewise, when $n=2$, data of 18B can be recorded; when $n=12$, data of 271B can be recorded over an angle of 336 degrees on the disk. In the present invention, by encoding and decoding the data using the EDC and ECC computation equations shown in Figures 4914(c) and 4914(d), when the data amount is smaller than 188B, the computation is performed assuming all remaining bits are 0s, so that the data is stored with a small recording capacity. This serves to shorten the productive tact. When performing laser trimming, as in the present invention, the above-described scalability has a significant meaning. More specifically, when performing laser trimming at a factory, it is important to shorten the productive tact. With a slow-speed apparatus which trims one stripe at a time, it will take more than 10 seconds to record a few thousand stripes to the full capacity. The time required for disk production is 4 seconds per disk; if full-capacity recording has to be done, the productive tact increases. On the other hand, for the moment, disk ID number will be a main application area of the present invention; in this application, the PCA area capacity can be as low as 10B. If 271B are recorded when only 10B need to be written, the laser processing time will increase by a factor of 6, leading to a production cost increase.

The scalability method of the present invention achieves reductions in production costs and time.

Please replace the paragraph, beginning at page 81, line 14, with the following rewritten paragraph:

In the playback apparatus shown in Figure 15, when $n=1$ as in Figure 33(b), for example, the ECC decoder 928 performs the EDC and ECC error correction computations shown in Figures 4914(c) and 4914(d), assuming that the data rows 951e to 951z all contain 0s; the effect of this is that data of 12 to 271B can be corrected for errors by using the same program. In this case, the number of program steps decreases, permitting the use of a small-capacity ROM in the microcomputer.